

CLAIMS

1. A method for recording, onto a recording medium, (i) AV data obtained by multiplexing a plurality of sets of stream data in accordance with a predetermined multiplexing rule, and (ii) associated data to be reproduced in synchronism with the AV data,

the method comprising:

a first step of dividing the AV data into partial AV data and of dividing the associated data into partial associated data, in accordance with a predetermined interval;

a second step of securing, in the recording medium, a first continuous region for continuously storing a series of the partial AV data and the partial associated data;

a third step of continuously recording the partial AV data and the partial associated data onto the first continuous region; and

a fourth step of recording, onto the recording medium, file system management information for (i) managing the partial AV data and the partial associated data as different files, and (ii) managing information for handling the partial AV data and the partial associated data as the different files.

2. The method as set forth in claim 1, further

comprising:

a fifth step of recording, onto the recording medium, (i) reproduction start time of the partial AV data, and (ii) correspondence information of the partial AV data and the partial associated data, both of which are disposed in the first continuous region.

3. The method as set forth in claim 1, further comprising:

a sixth step of recording, onto the recording medium, information indicating whether or not the partial associated data is recorded adjacent to the corresponding partial AV data.

4. A method for recording, onto a recording medium, (i) AV data obtained by multiplexing a plurality of sets of stream data in accordance with a predetermined multiplexing rule, and (ii) associated data to be reproduced in synchronism with the AV data,

the method comprising:

a first step of dividing the AV data into partial AV data in accordance with a predetermined interval;

a second step of securing, in the recording medium, a first continuous region for continuously storing (i) a series of the partial AV data and (ii) partial reservation

data for securing, during recording of the associated data, a region for storing partial associated data that is so divided as to correspond to the partial AV data;

a third step of continuously recording the partial AV data and the partial reservation data onto the first continuous region, while making sets of the partial reservation data; and

a fourth step of recording, onto the recording medium, file system management information for (i) managing the partial AV data and the partial reservation data as different files, and (ii) managing information for handling the partial AV data and the partial reservation data as different files.

5. The method as set forth in claim 4, further comprising:

a fifth step of dividing, during the recording of the associated data, the associated data into partial associated data in accordance with a predetermined interval;

a sixth step of recording, during the recording of the associated data, the partial associated data onto the region secured by the partial reservation data which is stored in continuity with the partial AV data corresponding to the associated data;

a seventh step of recording, onto the recording medium during the recording of the associated data, file system management information for (i) managing the partial associated data as a different file from the respective files of the partial AV data and the partial reservation data, (ii) managing information for handling the partial associated data as a different file.

6. The method as set forth in claim 4, further comprising:

an eighth step of recording, onto the recording medium, (i) reproduction start time of the partial AV data, and (ii) correspondence information of the partial AV data and the partial associated data, both of which are disposed in the first continuous region.

7. The method as set forth in claim 4, further comprising:

a ninth step of recording, onto the recording medium, information indicating whether or not the partial associated data is recorded adjacent to the corresponding partial AV data.

8. An AV data recording apparatus for recording, onto a recording medium, (i) AV data obtained by

multiplexing a plurality of sets of stream data in accordance with a predetermined multiplexing rule, and (ii) associated data to be reproduced in synchronism with the AV data,

the AV recording apparatus, comprising:

means for dividing the AV data into partial AV data and for dividing the associated data into partial associated data, in accordance with a predetermined interval;

means for securing, in the recording medium, a first continuous region for continuously storing a series of the partial AV data and the partial associated data;

means for continuously recording the partial AV data and the partial associated data onto the first continuous region; and

means for recording, onto the recording medium, file system management information for (i) managing the partial AV data and the partial associated data as different files, and (ii) managing information for handling the partial AV data and the partial associated data as different files.

9. An AV data recording apparatus for recording, onto a recording medium, (i) AV data obtained by multiplexing a plurality of sets of stream data in

accordance with a predetermined multiplexing rule, and
(ii) associated data to be reproduced in synchronism with
the AV data,

the AV data recording apparatus, comprising:

means for dividing the AV data into partial AV data
in accordance with a predetermined interval;

means for securing, in the recording medium, a
first continuous region for continuously storing (i) a
series of the partial AV data and (ii) partial reservation
data for securing, during recording of the associated data,
a region for storing partial associated data that is so
divided as to correspond to the partial AV data;

means for continuously recording the AV data and
the partial reservation data onto the first continuous
region, while making sets of the partial reservation data;
and

means for recording file system management
information for (i) managing the partial AV data and the
partial reservation data as different files, and (ii)
managing information for handling the partial AV data
and the partial reservation data as different files.

10. The AV data recording apparatus as set forth in
claim 9, further comprising:

means for dividing, during the recording of the

associated data, the associated data into partial associated data in accordance with a predetermined interval;

means for recording, during the recording of the associated data, the partial associated data onto the region secured by the partial reservation data which is stored in continuity with the partial AV data corresponding to the associated data;

means for recording, onto the recording medium during the recording of the associated data, file system management information for (i) managing the partial associated data as a different file from the respective files of the partial AV data and the partial reservation data, (ii) managing information for handling the partial associated data as a different file.

11. A data recording medium for storing (i) AV data obtained by multiplexing a plurality of sets of stream data in accordance with a predetermined multiplexing rule, and (ii) associated data to be reproduced in synchronism with the AV data,

wherein:

the data recording medium continuously stores (i) a series of partial AV data obtained by dividing the AV data in accordance with a predetermined interval, and (ii)

partial associated data obtained by dividing the associated data in accordance with a predetermined interval; and

the data recording medium stores file system management information for (i) managing the partial AV data and the partial associated data as different files, and (ii) managing information for handling the partial AV data and the partial associated data as different files.

12. A program for causing a computer to recording, onto a recording medium, (i) AV data obtained by multiplexing a plurality of sets of stream data in accordance with a predetermined multiplexing rule, and (ii) associated data to be reproduced in synchronism with the AV data,

the program causing the computer to perform:

a first step of dividing the AV data into partial AV data and of dividing the associated data into partial associated data, in accordance with a predetermined interval;

a second step of securing, in the recording medium, a first continuous region for continuously storing a series of the partial AV data and the partial associated data;

a third step of continuously recording the partial AV data and the partial associated data onto the first

continuous region; and

a fourth step of recording, onto the recording medium, file system management information for (i) managing the partial AV data and the partial associated data as different files, and (ii) managing information for handling the partial AV data and the partial associated data as different files.

13. A program for causing a computer to record, onto a recording medium, (i) AV data obtained by multiplexing a plurality of sets of stream data in accordance with a predetermined multiplexing rule, and (ii) associated data to be reproduced in synchronism with the AV data,

the program causing the computer to perform:

a first step of dividing the AV data into partial AV data in accordance with a predetermined interval;

a second step of securing, in the recording medium, a first continuous region for continuously storing (i) a series of the partial AV data and (ii) partial reservation data for securing, during recording of the associated data, a region for storing partial associated data that is so divided as to correspond to the partial AV data;

a third step of continuously recording the AV data and the partial reservation data onto the first continuous

region, while making sets of the partial reservation data;
and

a fourth step of recording file system management information for (i) managing the partial AV data and the partial reservation data as different files, and (ii) managing information for handling the partial AV data and the partial reservation data as different files.

14. A recording medium for storing the program as set forth in claim 12 or 13.